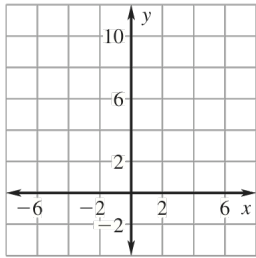


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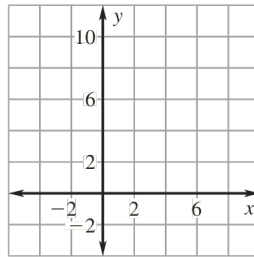
Failure to show work on all problems or use complete sentences will result in a LaSalle.

Solve the equation by graphing. How many solutions are there? SHOW how you found the axis of symmetry and the vertex.

1) $x^2 - 6x + 9 = 0$

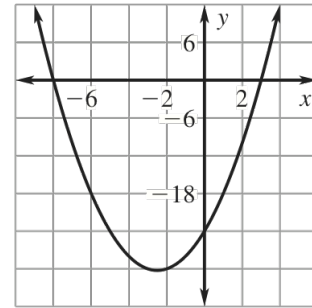


2) $x^2 - 7x + 10 = 0$



3) Use the graph below to find the solutions of the given equation.

$x^2 + 5x - 24 = 0$



$x = \{ \quad , \quad \}$

4) How would the graph of the function $y = x^2 + 4$ be affected if the function were changed to $y = x^2 - 3$?

- A. The graph would shift 4 units up.
- B. The graph would shift 3 units down.
- C. The graph would shift 7 units down.
- D. The graph would shift 4 units to the right.
- E. The graph would shift 4 units down.

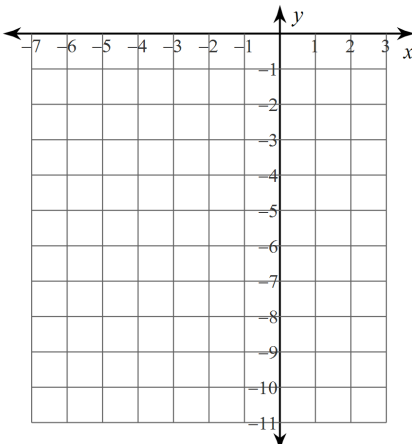
5) Which multiple choice option describes the correct transformation to the parent graph ($y = x^2$)?

$y = -8x^2 + 5$

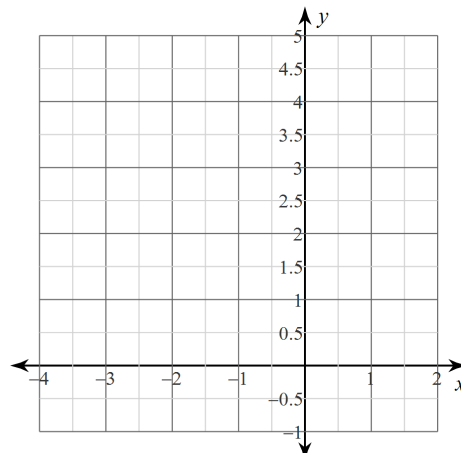
- A. Shrink and shift up 5 units
- B. Stretch and shift up 5 units
- C. Stretch and reflection across the x-axis
- D. Shrink, shift up 5 units, and reflection across the x-axis
- E. Stretch, shift up 5 units, and reflection across the x-axis

Graph the equations below. Identify the axis of symmetry, vertex, and domain/range.

6)
 $y = -2x^2 - 8x - 10$



7)
 $y = -x^2 - 4x$

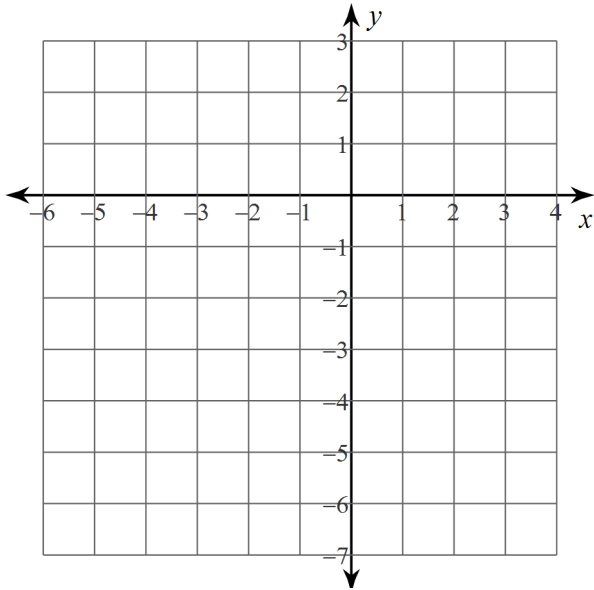


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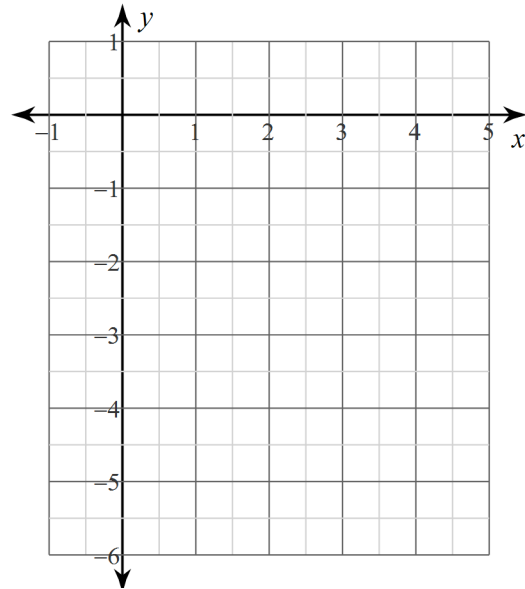
1) Determine the solution to the equation by graphing. Label the vertex and axis of symmetry.

$$y = -2x^2 - 12x - 16$$



2) Determine the solution to the equation by graphing. Label the vertex and axis of symmetry.

$$y = -\frac{1}{2}x^2 + 2x - 4$$



3) Factor the following:

a) $x^2 - 12x - 13$

b) $x^2 - 14x + 40$

c) $-3x^2 - 17x - 10$

4) Factor the following:

a) $6g^2 + 7g + 2$

b) $g^2 - 36$

c) $16g^2 - 56g + 49$

5) Describe the transformation from the parent function to $y = 2x^2 + 6$.

6) Describe the transformation from the parent function to $y = -\frac{1}{4}x^2$.

Name: _____ TP: _____

Failure to show work on all problems or use complete sentences will result in a LaSalle.

1) What is the sum of the solutions to $2x^2 - 7x - 4 = 0$?

- A. 3.5
- B. -4.5
- C. -7
- D. -9

2) Solve the equations:

a. $2c^2 - 11c + 5 = 0$

b. $-x^2 + x + 20 = 0$

3) What is the sum of the two values that satisfy the equation below?

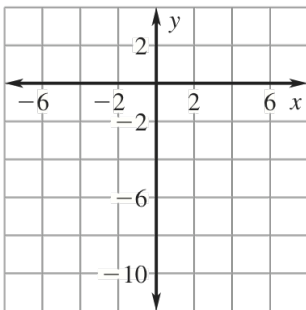
$$k^2 + 6k = 0$$

4) Solve the quadratic equation by factoring:

$$x^2 = 9x - 18$$

5) Find the zeros of the functions by graphing.

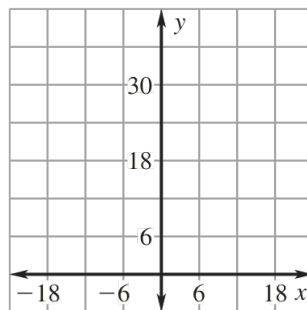
$$f(x) = -x^2 - 5x - 10$$



$x = \{ \quad , \quad \}$

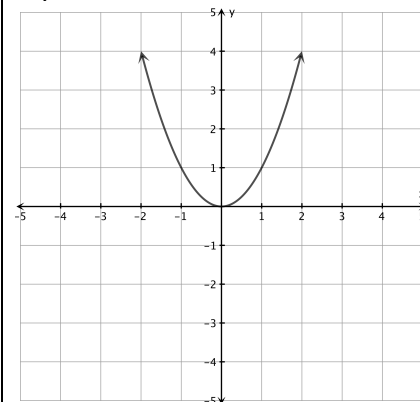
6) Find the zeros of the functions by graphing.

$$f(x) = x^2 + 12x + 36$$



$x = \{ \quad , \quad \}$

7) The graph $y = x^2$ is shown below. How many solutions does this quadratic equation have?



- A. 0
- B. 1
- C. 2
- D. 3

8) How would the graph of the function $y = x^2 - 2$ be affected if the function were changed to $y = x^2 + 1$?

- A. Shift 1 unit up
- B. Shift 2 units down
- C. Shift 3 units down
- D. Shift 3 units to the right
- E. Shift 3 units up

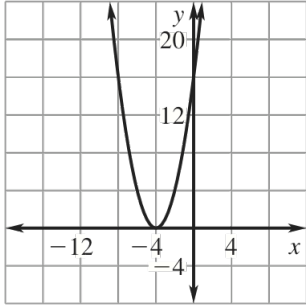
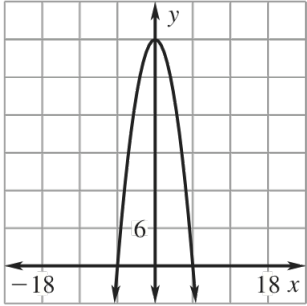
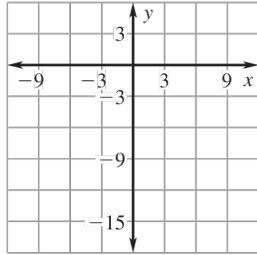
9) Describe the transformation from the parent quadratic function to $y = -3x^2 + 6$.

10) How would the graph of the function $y = x^2 + 6$ be affected if the function were changed to $y = \frac{1}{2}x^2 + 2$?

- a) The graph would shrink and shift down.
- b) The graph would shrink and shift up.
- c) The graph would stretch and shift up.
- d) The graph would stretch and shift down.

Name: _____ TP: _____

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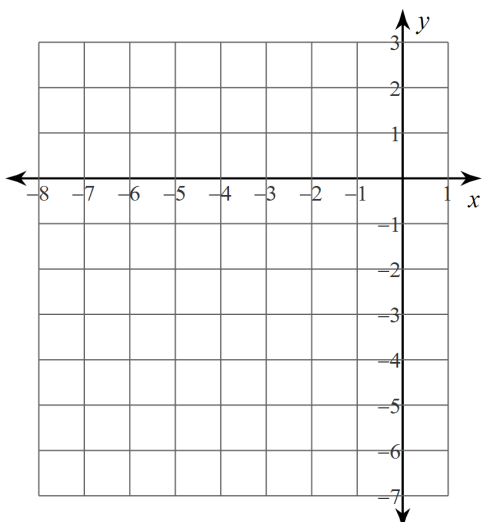
<p>1) Describe the transformation to $y = -x^2 - 8$ from the parent function.</p>	<p>2) Which statement best describes the transformation from $y = x^2 - 3$ to $y = x^2 + 5$?</p> <p>a) Shift down 8 units b) Shift up 8 units c) Shift up 5 units d) Shift down 3 units</p>	<p>3) Describe the transformation to $y = -4x^2$ from the parent function.</p>
<p>4) Use the graph below to find the solutions of the given equation. $x^2 + 8x + 16 = 0$</p>  <p>$x = \{ \quad \}$</p>	<p>5) Use the graph below to find the solutions of the given equation. $-x^2 + 36 = 0$</p>  <p>$x = \{ \quad , \quad \}$</p>	<p>6) What are the roots of the function: $-x^2 + 9x = 18$</p> 
<p>7) What is the sum of the roots of the following equation: $m^2 + 48 = -14m$</p>	<p>8) Find the zeros of the polynomial function: $f(x) = 10x^2 + 5x - 5$</p>	
<p>9) Find the zeros of the polynomial function: $f(x) = -3x^2 - 14x + 24$</p>	<p>10) What are the roots of the following equation: $p^2 + 64 = 16p$</p>	
<p>11) What is the sum of the roots of the following equation: $2c^2 - 11c = -5$</p>	<p>12) Find the zeros of the polynomial function: $g(x) = 16r^2 + 18r + 5$</p>	

PUSH IT TO THE LIMIT.

When graphing the equations below, show the a) table, b) how you found the axis of symmetry, c) how you found the vertex, d) domain and range.

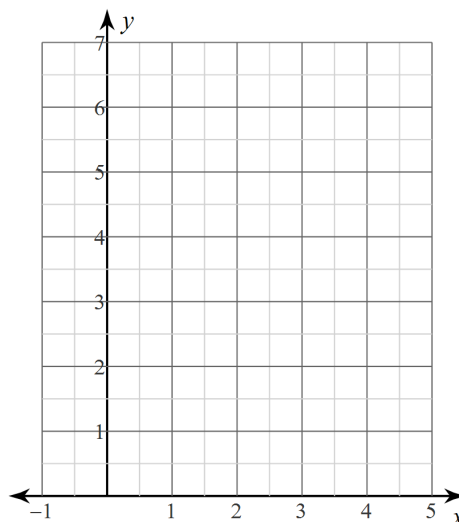
13)

$$y = -2x^2 - 16x - 30$$



14)

$$y = x^2 - 4x + 6$$



PUSH IT TO THE LIMIT.